Regency
the first name in solid state

PROFESSIONAL 2 WAY action radio

DATE 5/9/83

SSC Service Bulletin

no. 83-306

TO: ALL REGENCY COMMUNICATIONS PROFESSIONAL SALES & SERVICE CENTERS

ALL REGENCY COMMUNICATIONS PROFESSIONAL SALES REPRESENTATIVES

MODEL AFFECTED: MA-301 - TWO-TONE SEQUENTIAL DECODER

SUBJECT: UPDATING INTERFACE CIRCUITS OF MA-301, REV. H, P.C. BOARD

The MA-301 interfacing circuits have undergone a substantial change. These circuits have been changed to provide the option with a less sensitive interconnect requirement for the radios it services.

The message lamp (DØ) circuit has been slightly altered. The major change is in the K5 and K7 circuits. A D1 circuit has also been added.

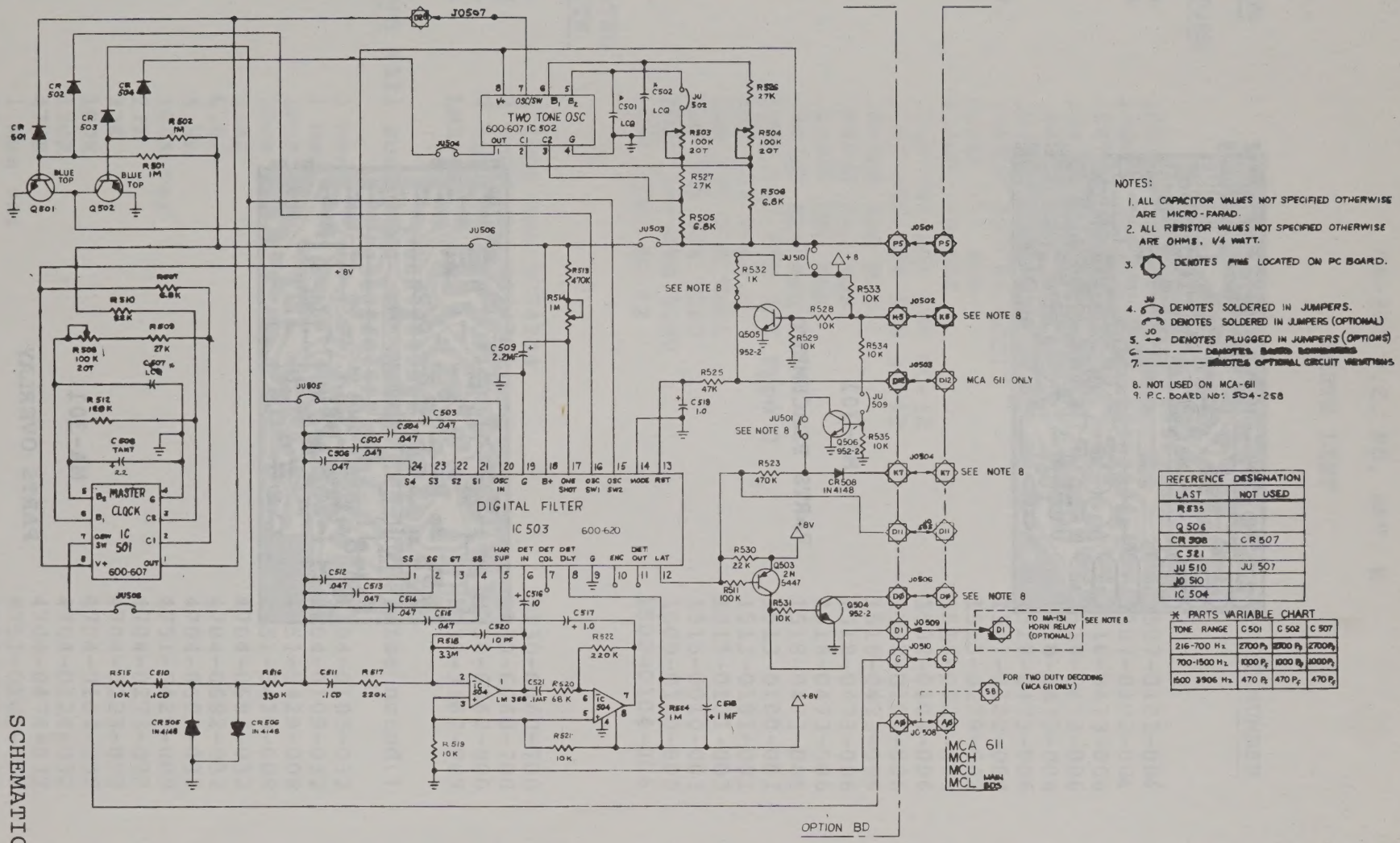
The circuit description in the service manual remains the same except for the last paragraph. Resetting for the MCA611 is the same but for all other radios using the K5 line, resetting is accomplished by pulling Pin 13 of IC503 low using Q505. For radios other than the MCA611 the K7 line's bias is removed by Q506 when the ground is removed from K5.

It must be noted that for MCA611 applications that JU501 and R532 be removed.

An updated Schematic along with a new Parts Placement, Parts Overlay, and Parts List are attached. These apply only to the REV. H, MA301 boards identified on the solder side of the P.C. Board with 504-258H.

TECHNICAL SERVICE DEPARTMENT

REGENCY COMMUNICATIONS, INC.



NOTES:

1. ALL CAPACITOR VALUES NOT SPECIFIED OTHERWISE ARE MICRO-FARAD.
2. ALL RESISTOR VALUES NOT SPECIFIED OTHERWISE ARE OHMS, 1/4 WATT.
3. ⬡ DENOTES PINS LOCATED ON PC BOARD.
4. JU ⌒ DENOTES SOLDERED IN JUMPERS. ⌒ DENOTES SOLDERED IN JUMPERS (OPTIONAL)
5. JO ⊸ DENOTES PLUGGED IN JUMPERS (OPTIONS)
6. ——— DENOTES BOARD BOUNDARIES
7. – – – – – DENOTES OPTIONAL CIRCUIT VARIATIONS
8. NOT USED ON MCA-611
9. P.C. BOARD NO: 504-258

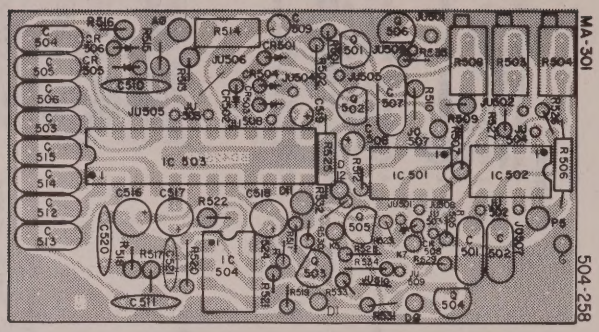
REFERENCE DESIGNATION	
LAST	NOT USED
R 535	
Q 506	
CR 508	CR 507
C 521	
JU 510	JU 507
JO 510	
IC 504	

* PARTS VARIABLE CHART

TONE RANGE	C 501	C 502	C 507
216-700 Hz	2700 P_B	2700 P_B	2700 P_B
700-1500 Hz	1000 P_E	1000 P_E	1000 P_E
1500 3906 Hz	470 P_F	470 P_F	470 P_F

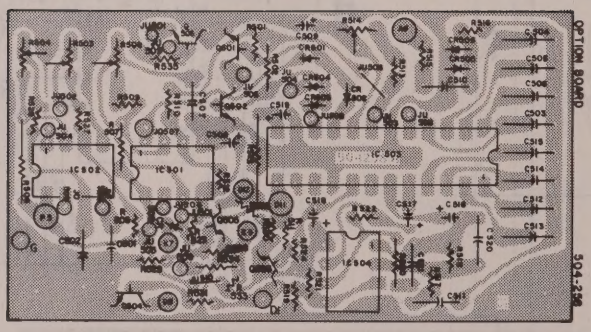
SCHEMATIC

TWO-TONE SEQUENTIAL DECODER



MA-301

PARTS PLACEMENT



MA-301

PARTS OVERLAY

MA-301 P.C. BD, REV. H

PARTS LIST

LOCATION	DESCRIPTION	PART NUMBER	ZONE
CAPACITORS			
C501*	1000pF 50V 5% LCQ17	1507-0102-004	D5
C502*	1000pF 50V 5% LCQ17	1507-0102-004	D5
C503	.047mF Rad. Mon.	1518-0473-006	C6
C504	.047mF Rad. Mon.	1518-0473-006	B6
C505	.047mF Rad. Mon.	1518-0473-006	B6
C506	.047mF Rad. Mon.	1518-0473-006	B6
C507*	1000pF 50V 5% LCQ17	1507-0102-004	C7
C508	2.2mF 15V 20%	1515-0229-003	B7
C509	2.2mF 15V 20%	1515-0229-003	C6
C510	.1uF +80-20% 12V BC-12	1502-0104-006	A7
C511	.1uF +80-20% 12V BC-12	1502-0104-006	A6
C512	.047mF Rad Mon.	1518-0473-006	B6
C513	.047mF Rad Mon.	1518-0473-006	B6
C514	.047mF Rad Mon.	1518-0473-006	B6
C515	.047mF Rad Mon.	1518-0473-006	B6
C516	10mF 10V 85D III Type U	1513-0100-001	B5
C517	1mF 50V Type U	1513-0101-001	B5
C518	1mF 15V 20% Tant	1515-0101-003	A4
C519	1mF 15V 20% T360	1515-0010-003	C4
C520	10pF 10% NPO 500V	1500-0100-605	B6
C521	.1mF 12V, BC-12	1502-0104-006	A5
INTEGRATED CIRCUITS			
IC501	2 tone osc SC74204	3130-6060-700	B7
IC502	2 tone osc SC74204	3130-6060-700	D5
IC503	2 tone dg fil SC74203	3130-6062-000	B5
IC504	LM358N	3130-3167-909	A5
RESISTORS (All resistors are ¼W 5% unless otherwise noted.)			
R501	1 meg	4704-0105-032	D7
R502	1 meg	4704-0105-032	D7
R503	100K var	4751-5429-008	D5
R504	100K var	4751-5429-008	D4
R505	6.8K	4704-0682-032	C5
R506	6.8K	4704-0682-032	C4
R507	6.8K	4704-0682-032	C7
R508	100K var	4751-5429-008	C8
R509	27K	4704-0273-032	C7
R510	22K	4704-0223-032	C8
R511	100K	4704-0104-032	B4
R512	120K	4704-0124-032	B8
R513	470K	4704-0474-032	C5
R514	1 meg var	4751-0105-002	C5
R515	10K	4704-0103-032	A8
R516	330K	4704-0334-032	A7
R517	220K	4704-0224-032	A6

LOCATION	DESCRIPTION	PART NUMBER	ZONE
R518	3.3 meg	4704-0335-032	A6
R519	10K	4704-0103-032	A6
R520	68K	4704-0683-032	A5
R521	10K	4704-0103-032	A5
R522	1 meg	4704-0105-032	A5
R523	470K	4704-0474-032	B4
R524	1 meg	4704-0105-032	A5
R525	47K	4704-0473-032	B4
R526	27K	4704-0273-032	D4
R527	27K	4704-0273-032	C4
R528	10K	4704-0103-032	C4
R529	10K	4704-0103-032	C4
R530	22K	4704-0223-032	B4
R531	10K	4704-0103-032	B4
R532	1K	4704-0102-032	C4
R533	10K	4704-0103-032	C4
R534	10K	4704-0103-032	C4
R535	10K	4704-0103-032	B4
TRANSISTORS			
Q501	Blue top SPS 1476	4801-0000-003	C8
Q502	Blue Top SPS 1476	4801-0000-003	C8
Q503	2N5447	4801-0000-135	B4
Q504	SPS-952-2	4801-0000-016	B4
Q505	SPS-952-2	4801-0000-016	C4
Q506	SPS-952-2	4801-0000-016	B4
DIODES			
CR501	diode germ	4807-1233-900	D8
CR502	diode germ	4807-1233-900	D8
CR503	diode germ	4807-1233-900	D7
CR504	diode germ	4807-1233-900	D7
CR505	diode sil IN4148	4805-1241-200	A7
CR506	diode sil IN4148	4805-1241-200	A7
CR507	not used		
CR508	diode Sil IN4148	4805-1241-200	B4

*Parts variable with tone frequency (refer to chart on Schematic).